Appl. No. 10/540,353 Amdt. Dated April 22, 2010 Reply to Office action of March25, 2009 Attorney Docket No. P17015-US1 EUS/GJ/P/10-2606

#### The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

What is claimed is:

- 1. (Canceled)
- 2. (Previously Presented) A method for use in a telecommunications network, comprising the steps of:

transporting Time Division Multiplex (TDM) time slots of a circuit switched connection from a first circuit switched node to a second circuit switched node through a packet switched network including a number of packet switched nodes, the circuit and packet switched nodes based on a Multiprotocol Label Switch (MPLS), further comprising the steps of:

in the first circuit switched node, encapsulating the time slots in a data frame adjusted to be transferred in the packet switched network;

stacking the data frame with (i) at least one inner MPLS label uniquely addressing a PCM system within the second circuit switched node and (ii) at least one outer MPLS label identifying a fixed path of consecutive packet switched nodes within the packet switched network, said outer label includes addresses of all the packet switched nodes included in the fixed path in addition to an address of the second circuit switched node; and

in the second circuit switched node, removing the outer MPLS label and transferring the time slots to the PCM system addressed by the inner label.

#### 3. (Cancelled)

Appl. No. 10/540,353 Amdt. Dated April 22, 2010 Reply to Office action of March25, 2009 Attorney Docket No. P17015-US1

EUS/GJ/P/10-2606

4. (Previously Presented) The method according to claim 2, comprising

the steps of:

in the first node, including the address of the first packet switched node of the

fixed path as the outer label; and

in each of the consecutive packet switched nodes, exchanging the content of the

outer label with the address of the packet switched node following current packet

switched node or, if current packet switched node is the last packet switched node of

the fixed path, with the address of the second circuit switched node.

5. (Previously Presented) The method according to claim 2, wherein that

the first and the second circuit switched nodes are Label Edge Routers (LERs) and the

packet switched nodes are Label Switched Routers (LSRs).

6. (Previously Presented) The method according to claim 2, wherein that

the circuit switched connection is a 64 kbit/s connection and the number of time slots in

the data frame is 32 or 24.

7. (Previously Presented) The method according to claim 2, wherein the

first circuit switched node and the second circuit switched node are exchanges in a

public telephone network.

8. (Previously Presented) The method according to claim 2, wherein that

the circuit switched connection is a real-time connection like a telephone call

connection.

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Page 3 of 6

Appl. No. 10/540,353 Amdt. Dated April 22, 2010 Reply to Office action of March25, 2009 Attorney Docket No. P17015-US1 EUS/GJ/P/10-2606

# REMARKS/ARGUMENTS

# 1. Claim Rejections – 35 U.S.C. § 103 (a)

Applicant re-asserts his argument that there is no equivalence between an IP packet and an MPLS label. MPLS stands for "Multi-Protocol Label Switching" which is a packet-switching virtual private network (VPN) technology. When MPLS VPN is used, incoming data packets are assigned a "label" by a label edge router (LER). Such labeled packets are forwarded along a label switch path (LSP). Along a LSP, each label switch router (LSR) forwards a packet based solely on the instructions of the label. At each hop, the LSR strips off the existing label and applies a new label which tells the next hop how to forward the packet. Finally, the LER at the destination system removes the label and delivers the packet to the destined address.

In contrast, an Internet Protocol (IP) packet uses a network-layer (Layer 3) protocol that contains addressing information and some control information that enables packets to be routed. IP is documented in RFC 791 and is the primary network-layer protocol in the Internet protocol suite. IP has two primary responsibilities: providing connectionless, best-effort delivery of datagrams through an internetwork; and providing fragmentation and reassembly of datagrams to support data links with different maximum-transmission unit (MTU) sizes.

In an MPLS network, LSP is enforced at every hop along the data path such that a secure path is provided across an IP cloud. Specific IP tunnels can be created throughout MPLS network for individual customer, without the need for encryption or end-user applications. LSP paths are designed for their traffic characteristics, as such, they are very similar to ATM path engineering.

In IP routing as an IP packet travels from one router to the next, every router makes it's own decision on where the packet should go. Each Router reads the IP packet header, and then runs a routing algorithm against the destination address to determine the next hop. Every router then chooses its own next hop for the packet based on the packets header and the routing algorithm. Routers will assign each packet

Appl. No. 10/540,353 Amdt. Dated April 22, 2010 Reply to Office action of March25, 2009 Attorney Docket No. P17015-US1 EUS/GJ/P/10-2606

into a set of "Forwarding Equivalence Classes (FECs)" They will then map each FEC to a next hop.

With MPLS every packet only has its IP layer header examined once, when it enters the MPLS network. After the initial FEC assignment a 32 bit fixed length label (called MPLS Label Header or Shim Header) is inserted into the packet that contains the assigned FEC then is sent to the next hop router with the label attached. The label is of local significance only. When MPLS routers are provisioned they will set up a table of label to FEC mappings. Each FEC is assigned a next hop. A label distribution protocol (LDP) is used to exchange label information between label switch routers that have a direct connection to each other. The protocol usually rides on top of the routing protocol in use by the use of extensions that have been developed for MPLS. As the packet goes from hop to hop across the MPLS network the network layer header no longer has to be examined by every router. Instead, the label is used to determine the next hop and which new label to use.

The old label is replaced with the new label, and the packet is forwarded to its next hop. With MPLS forwarding, once a packet is assigned FEC subsequent routers do no further network layer header analysis; the labels drive all forwarding decisions

MPLS packet forwarding has many advantages over IP layer forwarding. Since a packet is assigned to a FEC when it enters the network, the edge label switch router can use any information about the packet in determining which FEC to use, even if the information is not contained in the IP header. Packets with the same destination arriving on different ports of the router can be assigned to different FECs. Conventional forwarding, on the other hand, can only consider information that travels with the packet in the packet header. A packet that enters the network at a particular router can be labeled differently than the same packet entering the network at a different router, and as a result forwarding decisions that depend on the ingress router can be easily made. This cannot be done with traditional IP based forwarding, since the identity of a packet's ingress router does not travel with the packet.

Appl. No. 10/540,353 Amdt. Dated April 22, 2010 Reply to Office action of March25, 2009 Attorney Docket No. P17015-US1

EUS/GJ/P/10-2606

# **CONCLUSION**

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

Michael G. Cameron Registration No. 50,298

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Ericsson Inc. 6300 Legacy Drive, M/S EVR 1-C-11 Plano, Texas 75024

(972) 583-4145 michael.cameron@ericsson.com